

KELLY-SPRINGFIELD TIRE PLANT,
FACTORY BUILDING
701 Kelly Road
Cumberland
Allegany County
Maryland

HAER No. MD-102-A

HAER
MD,
I-CUMB,
4A-

PHOTOGRAPHS

WRITTEN HISTORICAL AND DESCRIPTIVE DATA

HISTORIC AMERICAN ENGINEERING RECORD

National Park Service
Northeast Region
Philadelphia Support Office
U.S. Custom House
200 Chestnut Street
Philadelphia, P.A. 19106

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Location: 701 Kelly Road
Cumberland
Allegany County, Maryland

USGS Cumberland, Maryland Quadrangle
Universal Transverse Mercator Coordinates:
17.690320.4390220

Date of Construction: 1918 - 1923

Engineer: S. Diescher & Sons, Pittsburgh, Pennsylvania
Architect: Edward Necarsulmer, New York, New York

Present Owner: Allegany County Commissioners
County Office Complex
701 Kelly Road
Cumberland, Maryland 21502

Present Use: Vacant

Significance: The Factory Building forms the nucleus of the Kelly-Springfield Tire Plant, an historically significant industrial complex in Allegany County. The facility was in operation from 1921 until 1987, and served as Kelly-Springfield's only manufacturing plant between 1925 and 1962. The plant was critical to the development of Cumberland during the twentieth century. The design, construction, and modification of the factory building reflect the evolution of the tire manufacturing process.

Project Information: Plans for the development of the proposed Riverside Industrial Park include demolition of portions of the main factory building. The header building will be removed and an access drive, providing vehicle access and short-term parking, will be constructed in its place. Documentation of the building to the standards of the Historic American Engineering Record prior to demolition was prescribed as a stipulation of a Memorandum of Agreement negotiated among the Economic Development Administration (EDA), the Allegany County Board of Commissioners, and the Maryland Historical Trust to mitigate removal of the structures. This documentation was undertaken in May and June 1995 in partial fulfillment of that agreement.

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Factory Building (Building 99, Wings 1-5, Courts 1-4)

Architectural Description

The factory building is an expansive three-story, multi-wing, masonry building measuring approximately 760 feet by 575 feet. The building comprises three sections: header building (Building 99), wings (Wings 1-4), and courts (Courts 1-4). The header building is oriented on an east/west longitudinal axis. Five wings, each oriented on a north/south longitudinal axis, extend from the north elevation of the header building. Three-story passageways connect the north ends of the wings. Between the wings are four enclosed courts, also oriented on an east/west axis.

The main factory building is constructed with a load-bearing masonry structural system composed of both brick and concrete. The exterior walls of the factory are brick and feature regularly-spaced, recessed brick bays with symmetrical multi-light steel hopper windows. The windows throughout the factory are typically 18-light by 12-light industrial sash windows with operable center-pivot sections. The roof of the main factory is a low-pitched reinforced concrete slab sheathed in impregnated gravel. A parapet wall with simple terra cotta coping delineates the structure's roof line. The roof planes are punctuated by regularly placed metal roof ventilators.

Numerous one-story buildings (Buildings 24, 26, 27, 31, 31A, and 41) are located along the north and south elevations of the original brick core of the building. These buildings are typically one-story structures constructed of concrete block and steel. The brick walls of the original factory building core are largely obscured by these additions.

Header Building. The three-story header building has a rectangular plan, measuring approximately 760 feet long by 120 feet wide. The building is oriented on an east/west axis, perpendicular to the wings and courts.

The header building is divided into four levels: basement (Floor A), ground floor (Floor B), mezzanine level (Floor C), and top level (Floor D). The basement floors are concrete, while the upper floors are two-inch by ten-inch yellow pine covered with one-inch maple flooring.¹ Floor C, or mezzanine, does not extend throughout the entire building. Only the eastern section of the header building adjoining Wing 1 features a full mezzanine (Floor C). Floor C was omitted in the remainder of the header building, providing an open, two-story production area on Floor B with a ceiling height of approximately 24 feet. Industrial sash windows and overhead inclining monitors provide natural light to the ground floor level. The header building has a main traffic aisle which runs down the center of the building and provides access to all portions of the main factory.

Wings. The five three-story wings each have a rectangular plan, measuring approximately 60 by 430 feet. The wings are 32 bays long. The wings are oriented on a north/south axis, perpendicular to the header building. Stair towers are located at each end of the wings. The exterior brick walls feature regularly-spaced, recessed brick bays. The bays are punctuated by windows that are typically 18-light by 12-light industrial sash with operable center-pivot sections.

¹ James W. Thomas and Judge T.J.C. Williams, *History of Allegany County, Maryland* (L.R. Titworth & Co., 1923), 432.

The interiors of the wings are open to accommodate large machinery. Typical interior dimensions are 60 feet by 380 feet. Concrete piers are spaced at 20-foot intervals. The typical wing has a full basement (Floor A), a full main floor (Floor B), a partial mezzanine (Floor C), and a full second floor (Floor D). Ceiling heights are 11 feet 6 inches on Floors A, B, and C, and 16 feet on Floor D. Like the header building, the floors are concrete on the basement level; and are yellow pine covered with maple flooring on the upper floors.² The interiors exhibit industrial finishes with painted brick walls and exposed floor boards.

A concrete loading platform, approximately four feet above street level, extends along the east elevation of Wing 1. The loading platform is partially covered by an overhanging roof; the roof is supported by a steel frame attached to the building with steel tie rods. The roof of the overhang is concrete. It is sloped toward the building with an interior drain system. Sliding track and metal overhead doors located along the loading dock provide access to Floor B of the header building. A carbon black storage tower is located on the roof at the northern end of Wing 1. Two metal dust collectors are located on each side of the tower.

A four-story stair tower, measuring 20 feet by 60 feet, is located at both the north and south ends of each wing. Each stair tower contains a freight elevator, stairway, and restrooms. The stair towers project one story above the roof line of the factory to provide room for the elevator apparatus. The stair towers feature metal industrial sash windows. Each stair tower terminates in a flat roof.

Courts. Three of the four courts, although originally constructed as open courts, now are single-story, enclosed areas. Court 4 was the only one of the four courts originally designed and built as an enclosed court. Court 4 retains its original plan.

Courts 1-3 feature a continuous, flat roof monitor that extends the full length of the court. The roof is supported by a metal roof truss system and is sheathed with metal panels. The court interiors are interrupted by a single row of slender steel posts spaced at 20-foot intervals along the building's centerline. These steel piers, in conjunction with the exterior walls of the wings, support the metal roof trusses. The center-pivot windows in the monitors evenly distribute natural light through the building and provide ventilation. The ceilings of Courts 1-3 measure 11 feet 8 inches under the steel trusses. Typical dimensions of the enclosed courts are 385 by 80 feet.

Court 4, the only original enclosed court, is larger than the other courts. The ceiling height of Court 4 extends 24 feet 2 inches. Court 4 features a continuous butterfly roof monitor that extends the full length of the court. A single, vertical pier supports each metal roof truss. Unlike the other courts, Court 4 has a full basement. One unique feature of Court 4 is the light well at the southern end of the court. This light well separates Court 4 from the header building and provides light to the interiors of both the court and the header building.

Historical Evolution

The current appearance of the factory building is the result of three major building campaigns. These coincide with the major periods of development of the site.

² Thomas and Williams, *History of Allegany County*, 432.

Early Tire Manufacturing in Cumberland (1921-1942). The factory building was completed in 1923 as the primary manufacturing area within the complex. The building was designed so that the general production process moved from east to west through the building. Wing 1, the easternmost wing, served as the receiving area for the factory. A railroad spur, extending along the wing's loading dock, provided direct access for materials to the factory. Completed tires were shipped from the western side of the building.

Although manufacturing was concentrated on the first floor (Floor B), the basement (Floor A) and the upper floors (Floors C and D) also were used. Wings 1 and 2 originally contained the mills used for mixing the rubber; Wing 3 contained the tread and tube area; the header building housed the calendaring and fabric cutting equipment; and Wings 4 and 5 contained tire building and curing areas. Floor D contained some tire building areas, inner tube and bead assembly areas, storage areas, and offices.³

During this period, three of the four courts were open. The open court areas were not used for manufacturing; they provided light and ventilation into the work spaces. Court 4 housed the tire curing operations. An historic photo of the plant ca. 1935 shows the factory when Courts 1-3 were open.

Ammunition Manufacturing (1943-1945). During World War II, when the Allegany Ordnance Plant was in operation, most of the spaces within the factory building changed uses. Wing 1 was used for tool storage. Wing 2 housed the cafeteria on Floor B and Ordnance offices on Floor D. Wing 3 contained the lead shop on Floor A, bullet manufacturing and assembly on Floors B and C, and the Kelly-Springfield Engineering Company Offices on Floor D. Floors B and C of Wing 4 were used for case manufacturing. Wing 5 contained the gauge and weigh departments on Floors B, C, and D. The header building contained the hospital, primer insert department, shipping department, and raw material store room on Floor A; tool storage and carton manufacturing on Floor C; and the government inspection and labeling & packing department on Floor D.⁴

Return to Tire Manufacturing at the Cumberland Plant (1943-1987). The most dramatic changes to the factory building occurred during the third period of development. Major modifications occurred in 1944, during the conversion of the plant from the manufacture of munitions to tires. This modification consisted of infilling Courts 1-3 to provide additional manufacturing areas. The infilling of the courts was undertaken to maximize efficiency by creating a continuous production area on Floor B. The wing layout had become inefficient; the flow of production was hindered by the division of space.

To create the enclosed courts, a steel-frame monitor roof was constructed and a concrete floor was poured. Windows and portions of the brick walls on Floor B of the wings were removed to link the courts and wings.

Infilling the courts not only changed the physical fabric of the building, but it altered the manufacturing process. The enclosed courts created an uninterrupted production area by connecting all the wings at the ground floor (Floor B). Although the tire manufacturing process followed the same general flow from east to west through the building, the process became more efficient. Manufacturing increasingly became concentrated on the first floor (Floor B). Machinery, such as the cooling conveyors, were installed

³ Main Building, first floor plan, 27 August 1928.

⁴ Allegany Ordnance Plant, 25 January 1943.

so that they extended crosswise through wings and courts. The upper floors, with the exception of Floor D in Wing 5 where the Final Finish department was located, were used to house offices, the cafeteria, and miscellaneous storage.⁵

The trend toward single-level manufacturing continued into the 1950s and 1960s, when numerous one-story buildings were constructed adjacent to the main factory building to accommodate the plant's expanded operations. These new structures included three tire building structures (Building 41, 31, and 31A) added to the north elevation of the wings and courts, and new production areas and warehouses (Buildings 24, 26, and 27) added to the south elevation of the header building. Another addition along the north elevation of the factory was Building 11, located at the north end of Wing 1. This two-story addition was built to house a new, high-speed Banbury mixer and pelletizer.

⁵ Main Building, "B" floor plan, machinery layout, 27 September 1943.

SOURCES OF INFORMATION/BIBLIOGRAPHY

A. Engineering Drawings:

Drawings in the collection of the Allegany County Commissioners, Cumberland, Maryland:

1928, August 27, revised September 26, 1940. Main Building, first floor plan. One sheet.

1920, June 14. Rubber Tire Factory, elevations of west side on column line AH & AF. One sheet. S. Diescher & Sons, Pittsburgh, Pennsylvania.

1920, July 19. Rubber Tire Factory, section between columns 51 & 52, looking north. S. Diescher & Sons, Pittsburgh, Pennsylvania.

1928, August 22. Basement floor plan, Main Building. One sheet.

1928, August 22. Second floor plan, Main Building. One sheet.

1943, May 17. Eight-Inch Shell Line Layout, Floor A (Factory Building). Five sheets.

1943, September 27. Main Building, "B" floor plan, machinery layout. One sheet.

B. Historic Views (All historic views courtesy of Kelly-Springfield Tire Co., Corporate Headquarters, Cumberland, Maryland:

View south of wings and courts. Ca. 1950.

View southeast of Wings 1 and 2. Ca. 1950.

View of courts under construction. 1944.

Interior view of court after completion. 1944.

Interior view of Factory Building, Final Finish Department. Ca. 1944.

Interior view of Factory Building, Banbury Mixer. Ca. 1945

Interior view of Factory Building, Court 4, Curing Equipment. No date.

Interior view of Factory Building, Header Building, Calendering Equipment. No date.

C. Interviews:

Peterson, Howard H. Interview by Eliza H. Edwards and Patrick Giglio. Tape recording, 12 May 1995. Allegany County Commissioners, Cumberland, Maryland.

D. Bibliography:

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